
CHAPTER ONE

SUMMARY OF FINDINGS

The regulatory framework for protecting the environment of Galveston Bay is very complex, involving literally hundreds of laws and every level of government: federal, state, regional, local, and special district. A clear understanding of this framework is an essential first step toward developing a comprehensive management plan for the bay. This study consists of two parts: the text of this report and a computerized information base containing relevant portions of the texts of the federal and state laws and regulations. Information contained in the computerized information is indicated in the text (except in this chapter) by underlined references. The text portion of the report is itself divided into two parts, with three appendices providing additional information about federal laws and agencies, state agencies and their regulatory authorities, and local and regional authorities. Information contained in the appendices is indicated in the text (again, not in this chapter, where it would be intrusive) by boldfaced references.

One way to understand the complex regulatory framework is to order laws and agencies according to issues or problems. The Galveston Bay National Estuary Program has developed a list of sixteen "action plan topics," or areas for which it intended to develop action plans as part of its comprehensive management program. Our discussion of the regulatory framework is ordered by using the ten action plan topics that concern substantive areas.

SOURCE CONTROLS

Point Sources. In Texas at present, generators of point source discharges are regulated under a dual permitting system: they must obtain permits both from the Texas Water Commission (TWC) or the Texas Railroad Commission (RRC) and from the U.S. Environmental Protection Agency (EPA), which administers the National Pollution Discharge Elimination System (NPDES). TWC designates uses for segments of water and calculates surface water quality standards, which are revised every three years, for these uses. EPA issues NPDES permits based on the Texas water quality standards and consistent with the National Environmental Policy Act. The Texas Railroad Commission has authority over discharges from activities relating to exploration and production of oil and gas. In an effort to improve water quality, storm water discharges are now defined as point sources.

Non-point Sources (NPS). Nonpoint sources of pollution come from such sources as urban runoff, agriculture, hazardous waste disposal sites, and septic tanks. Stormwater runoff is now regulated as a point source under the federal Clean Water Act. Federal funding is available to implement control programs for NPS pollution under the Clean Water Act, which requires states to identify water bodies affected by NPS pollution and develop programs to control it. The Texas Water Commission undertakes these programs.

Agricultural and urban pesticide runoff is indirectly regulated by federal and state requirements that pesticides be used according to labeled instructions. Soil erosion also constitutes a nonpoint source of pollution, both because of pesticide residues the soil may contain and, more importantly, because the sediment itself can increase turbidity of bay water. Several agencies, including the federal Soil Conservation Service and the local Soil Conservation Districts, work with landowners to control erosion.

Wastes of several kinds may become nonpoint sources. Septic tanks, which are regulated by the Texas Department of Health or designated local county health departments, may leak or create runoff if not operating properly or installed in unsuitable locations. Landfills containing hazardous or nonhazardous waste may also create surface runoff. Municipal landfills are regulated by TDH; hazardous waste disposal facilities are primarily regulated by the Texas Water Commission under several federal laws. A permitting system allows TWC to ensure that wastes are put into properly constructed disposal facilities. The Texas Railroad Commission regulates injection wells for disposal of materials from oil and gas exploration and production. Leachates from any of these landfills or wells could enter Galveston Bay through groundwater and could then pose a further environmental risk. Finally, wastes disposed into air are regulated by the Texas Air Control Board. If such wastes fall onto Galveston Bay waters, they might concentrate on the bottom or be taken up by living organisms, but the extent of this problem is presently unknown.

Spills/Dumping. Spills are regulated by many different agencies, and spill response is conducted by these agencies as well as by private spill response teams maintained by private companies or by public-private response teams. The Texas Water Commission is the lead agency for spill response and cleanup, with special responsibility for hazardous materials. Oil spills were the responsibility of the Texas Railroad Commission until the 1991 session of the Texas Legislature gave it to the General Land Office. The federal Environmental Protection Agency and the Coast Guard ensure that responsible parties undertake cleanup and assist when necessary. Starting in 1995, oil tankers will gradually be required to have double hulls in order to minimize the likelihood of marine oil spills. Dumping is regulated under a series of federal laws, but enforcement is difficult and dumping is widely believed to occur regularly. Marine debris is regulated under Annex V of the MARPOL Convention, which prohibits disposing any plastics into the sea. Under the Marine Plastic Pollution Research and Control Act of 1987, the Environmental Protection Agency regulates discharge of plastics, food wastes, and other garbage within the 200 mile zone. The Coast Guard enforces the law by boarding ships.

Dredging/Filling. Construction activities in navigable waters of the U.S. are regulated under the federal Rivers and Harbors Act of 1899. Disposal of dredge material is also regulated under Section 404 of the Clean Water Act. Permits under both laws are granted by the U.S. Army Corps of Engineers; section 404 permits are also reviewed by EPA, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and several state agencies, including TWC, Texas Parks and Wildlife Department, and the General Land Office. A recent interagency agreement between the Corps and EPA is intended to provide additional

protection to wetlands. The Corps may also issue general permits and letters of permission that exempt projects meeting certain criteria from individual review.

Freshwater Inflow. Freshwater inflow is regulated largely by the water rights provisions of the Texas Water Code administered by the Texas Water Commission. Diversions of water are ranked, with municipal and agricultural uses much more important than preservation of bays and estuaries. In issuing permits for diversions, TWC must take into account 1) studies by the Texas Parks and Wildlife Department and the Texas Water Development Board that determine inflow conditions necessary to maintain bays and estuaries and 2) effects on fish and wildlife. Although TPWD reviews permits, it cannot veto them.

ESTUARY MANAGEMENT

Shoreline Development. Shoreline development is regulated primarily under local zoning and development ordinances. The major cities on Galveston Bay, Houston, Baytown, and Pasadena, do not have zoning ordinances although Houston is developing one. Existing and proposed zoning ordinances focus on neighborhood compatibility rather than natural resource protection. At the same time, all localities on the bay are actively seeking new development and, in many cases, providing tax and permit abatements as part of the recruitment effort. The Texas Coastal Zone Management Plan, provided for in acts passed by the legislature in 1989 and 1991, may increase governmental control over shoreline development. The more stringent clean air standards of the federal Clean Air Act of 1990 may have the effect of limiting new manufacturing in the bay area, and development in undeveloped areas of barrier islands and beaches is discouraged under the Coastal Barrier Resources Act.

Habitat Protection. Habitat is protected under the federal Endangered Species Act, the Fish and Wildlife Conservation Act, and other laws, generally administered by the federal Fish and Wildlife Service, that require various activities to be reviewed for their effects on habitat and for habitat to be acquired if necessary. The Texas Parks and Wildlife Department reviews many activities at the state level for their effects on habitat, although in general it cannot veto permits. The General Land Office grants easements on state-owned submerged lands and oversees recreational cabins already built in bays and wetlands.

Several federal laws focus especially on wetlands, a particularly important and diverse form of habitat. A controversy over the definition of wetlands has been fueled by the August 1991 announcement of a Bush Administration proposal to alter the definition to reduce the number of acres designated as wetlands and rank wetlands according to their importance. Resolution of this controversy will be important to continued use of the Rivers and Harbors Act and section 404 of the Clean Water Act as tools to protect habitat.

Species Protection. The federal Endangered Species Act, which is implemented by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, protects living resources and their habitat. The two agencies may review all projects, whether federal or not, which

may affect species listed as endangered or threatened. Under the Fish and Wildlife Coordination Act, the same agencies, along with the Texas Department of Parks and Wildlife, also have authority to review proposed projects of any federal agency that hopes to control or modify any body of water. TPWD also sets limits on takings of fish and wildlife and enforces them, and undertakes a variety of other programs, including nursery protection and designation of scientific areas, that are intended to protect living resources. The Texas Department of Agriculture reviews special use permit requests for pesticides to ensure that the use will not adversely affect endangered species.

Human Health. Human health is protected by water quality laws discussed above, by laws concerning hazardous waste disposal, and by state activities concerning fish and shellfish consumption. The Texas Department of Health surveys bodies of water and classifies them according to their ability to produce healthful shellfish. Of Galveston Bay's total of 331,000 acres available for shellfish production, 60 percent were closed in 1990. The Texas Water Commission also samples water to determine water quality.

Subsidence/Shoreline Erosion/Sea Level Rise. The Harris-Galveston Coastal Subsidence District attempts to end subsidence by regulating withdrawal of groundwater within its boundaries. Other actions that could reduce shoreline erosion and minimize flooding are possible under the federal Coastal Management Act of 1972, in which Texas is not yet a participant. The 1989 and 1991 state laws that designated the General Land Office as the lead agency in working with numerous other state agencies to develop a long-term plan for managing the Texas coast may lead to additional state power to limit shoreline erosion. The U.S. Soil Conservation Service along with local soil conservation officers have instituted programs for reducing soil erosion through appropriate plantings.